

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A computerized system that transforms hierarchical data into a rowset, the system comprising:
 - a parser that parses the hierarchical data ~~to form~~, rearranges data from the hierarchical format into rowset format comprising at least a row, column based at least on one or more implicit metaproperties of the hierarchical data and converts tag-formatted, text data in the hierarchical format into the rowset data associated with one or more data-types;
 - an active store that holds a parsed image of the hierarchical data; and
 - a query processor that receives from a process a query of a database query language including a number of metaproperties and that uses the query in selecting a subset of the data from the active store that matches the query to form the rowset, and returns the rowset to the process as query results, the rowset explicitly preserves one or more implicit metaproperties associated with the hierarchical data.
2. (Original) The computerized system of claim 1, wherein the parser comprises: a module that converts the hierarchical data to an internal representation in the active store.
3. (Original) The computerized system of claim 2, wherein the internal representation is a document object model (DOM).
4. (Original) The computerized system of claim 2, wherein the internal representation is an edge table.

5. (Original) The computerized system of claim 4, wherein the hierarchical data is XML data.
6. (Original) The computerized system of claim 2, wherein the module comprises: a module that identifies nodes in the hierarchical data.
7. (Original) The computerized system of claim 1, wherein the query comprises: a Structured Query Language (SQL) statement.
8. (Original) The computerized system of claim 7, wherein the Structured Query Language (SQL) statement comprises: a SELECT statement.
9. (Original) The computerized system of claim 8, wherein the query includes row information and the column information comprising: a row pattern and one or more column patterns that identifies information in the XML active store.
10. (Currently Amended) The computerized system of claim 1, wherein the hierarchical data is one of XML data or SGML data.
11. (Canceled)
12. (Currently Amended) A method comprising:
 - receiving a query from a process;
 - identifying row and column information in tag formatted, text-based hierarchical data using a database query language;
 - using a number of implicit metaproperties comprising at least a parent metaproperty that associates each node in the hierarchical data with a parent node and the row and column information in transforming the hierarchical data into a rowset comprising the text data converted into one or more data types; and
 - explicitly storing the implicit metaproperties within the rowset; and
 - returning the rowset as query results to the process.

13. (Original) The method of claim 12, wherein identifying row and column information in the hierarchical data comprises: using a row pattern to identify row information in the hierarchical data; and using a column pattern to identify column information in the hierarchical data.
14. (Canceled)
15. (Currently Amended) The method of claim 14, wherein using ~~a~~ the parent [[ID]] metaproperty in transforming the hierarchical data into a rowset comprises: using the parent [[ID]] metaproperty in forming an edge table for use in transforming the hierarchical data into a rowset.
16. (Original) The method of claim 12, wherein using a number of metaproperties and the row and column information in transforming the hierarchical data into a rowset comprises: using a parent ID metaproperty and a parent metaproperty in transforming the hierarchical data into a rowset.
17. (Original) The method of claim 12, further comprising: processing the rowset using relational techniques to form a second rowset.
18. (Original) The method of claim 17, further comprising: transforming the second rowset into a second hierarchical data stream.
19. (Currently Amended) The method of claim 12, further comprising: identifying and using the implicit metaproperties ~~data~~ in transforming the hierarchical data into a rowset.
20. (Canceled)
21. (Canceled)

22. (Currently Amended) The method of claim 12, further comprising [[21, wherein]] adding overflow data to the rowset to form a second rowset [[comprises:]] by adding a column to the rowset ~~in which to include~~ comprising the overflow data.

23. (Currently Amended) A method comprising:

~~converting a first hierarchical data stream into a rowset via a database query language;~~

parsing a first hierarchical data stream comprising text-based tagged information to generate an internal representation by employing implicit metaproperties of the hierarchical data stream;

converting the text-based data within the internal representation into one or more data types;

receiving a query comprising one or more of row or column information;

retrieving at least a subset of data from the internal representation in response to the query;

formatting the retrieved subset of data into a rowset based on the information in the query;

inserting ~~information~~ one or more of row or columns into the rowset; and

converting the rowset back into a second hierarchical data stream without loss of data by employing at least the implicit metaproperties.

24. (Original) The method of claim 23, wherein converting the rowset back into a second hierarchical data stream without loss of data comprises: using a number of metaproperties in converting the rowset back into the second hierarchical data stream.

25. (Currently Amended) A method comprising:

via commands of a database query language, receiving a rowset comprising data associated with one or more data types and organized as one or more of rows, columns that include one or more metaproperties;

storing the rowset data;

transforming at least a subset of the stored rowset data into text-based tag-

formatted hierarchical information wherein the tags are generated by utilizing at least the metaproperties and information within the rows, columns, and

~~using a number of metaproperties in transforming the rowset into an XML data file.~~

26. (Original) The method of claim 25, wherein receiving a rowset comprises: receiving a rowset including overflow data.

27. (Currently Amended) The method of claim 25, further comprising: transmitting ~~the XML~~ a data file comprising the tag-formatted hierarchical information.

28. (Original) The method of claim 25, wherein receiving a rowset comprises: receiving a rowset having a first data field associated with an ID metaproperty and a second data field associated with the ID metaproperty.

29. (Currently Amended) The method of claim 28, ~~further comprising wherein using a number of metaproperties in transforming the rowset into XML data comprises: fusing the first data field to the second data field in the process of converting the rowset into an XML data file~~ comprising the tag-formatted hierarchical information.

30. (Currently Amended) A computer-readable medium having stored thereon computer-executable instructions for performing operations comprising:
via commands of a database query language, using a number of metaproperties associated with a rowset comprising data of one or more data types and organized as one or more of rows, columns that include the metaproperties to convert the rowset to an ~~XML~~ active store; ~~and~~

generating XML tags by utilizing at least the metaproperties and information associated with the rows, columns from the active data store;

identifying the rowset data to be tagged by utilizing at least the metaproperties and the information associated with the rows, columns;

transforming the rowset data into text-based data;

converting the text based data ~~XML active store~~ into an XML document
formatted in accordance with the generated tags. ~~form XML formatted information.~~

31. (Previously Presented) The computer-readable medium of claim 30, further comprising: an XML formatter for transforming the active store to a second XML data file.

32. (Canceled)

33. (Currently Amended) A computer-readable medium having stored thereon computer-executable instructions for performing operations comprising:
via commands of a database query language, identifying row and column information in a hierarchical data stream comprising text-based tagged information to generate an internal representation; and
preserving data within the internal representation as one or more data types;
receiving a query comprising one or more of row or column information;
retrieving at least a subset of data from the internal representation in response to the query;
formatting into a rowset based on the information in the query and implicit metaproperties of the hierarchical data stream;
using implicit information within the hierarchical data stream and the row and column information in transforming the hierarchical data stream into a rowset.

34. (Currently Amended) The computer-readable medium of claim 33, wherein the hierarchical data stream is ~~an~~ one of XML or SGML data stream.

35. (Canceled)

36. (Original) The computer readable medium of claim 33, wherein the hierarchical data stream is derived from data capable of being represented in a graph.

37. (Currently Amended) A computerized system for transforming hierarchical data into a rowset, the system comprising:

means for parsing ~~the~~ text hierarchical data formatted in accordance with one or more tags;

means for storing the parsed data and explicitly preserving information implicit in the hierarchical data;

means for converting the parsed text data into one or more data types; ~~to form an active store~~; and

means for receiving a query of a database query language including a number of metaproperties implicitly associated with the hierarchical data and for using the query in selecting data from the means for storing active store to form the rowset comprising at least a row, column including data of the one or more data types.

38. (Canceled)

39. (Canceled)

40. (Previously Presented) A method according to claim 12, wherein the database query language is the structured query language (SQL).

41. (Previously Presented) A method according to claim 20, further comprising: converting the second rowset into a second XML file without loss of data.

42. (Previously Presented) A method according to claim 23, further comprising: converting the rowset back into a second hierarchical data stream without loss of data.

43. (Previously Presented) A method according to claim 23, wherein the database query language is the structured query language (SQL).

44. (Previously Presented) A method according to claim 25, wherein the database query language is the structured query language (SQL).

- 45. (Previously Presented) A computer-readable medium according to claim 30, wherein the database query language is the structured query language (SQL).
- 46. (Canceled)
- 47. (Canceled)
- 48. (Previously Presented) A computer-readable medium according to claim 33, wherein the database query language is the structured query language (SQL).
- 49. (Previously Presented) A computerized system according to claim 37, wherein the database query language is the structured query language (SQL).